

Please delete the present Abstract of the Disclosure.

Please add the following new Abstract of the Disclosure:

A novel polypeptide, a polynucleotide, an expression vector, a cell transfected with the expression vector, a method for screening an insulin resistance improving agent and a carbohydrate metabolism improving agent, and a method for producing a pharmaceutical composition are provided. The polypeptide is useful in screening an insulin resistance improving agent and a carbohydrate metabolism improving agent. When the polypeptide is overexpressed in a fat cell, the activity of Akt2 is reduced. Fat cells express the polypeptide. The polynucleotide encodes the polypeptide. The expression vector includes the polynucleotide. The screening method uses the polypeptide to screen for an insulin resistance improving agent and a carbohydrate metabolism improving agent. The production method uses the substance obtained by the screening method as the active ingredient of the pharmaceutical composition. The pharmaceutical composition is useful for insulin resistance improvement and carbohydrate metabolism improvement.